

Applicant : Cosmin Iorga
Serial No. : 10/671,754
Filed : September 26, 2003
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Attorney's Docket No.: 1839-US

AMENDMENTS TO THE DRAWINGS:

The attached replacement sheet of drawings includes changes to Fig. 4 and replaces the original sheet including Fig. 4.

In Figure 4, fanout circuitry 30 was referenced and the reference to Figure 1 was changed to reference Figure 3.

Attachments following last page of this Amendment:

Replacement Sheet (1 page)

REMARKS

Claims 1 to 8 and 13 to 17 are pending in this application of which claims 1, 5, 8 and 13 are the independent claims. Favorable reconsideration and further examination are respectfully requested.

Initially, the Examiner objected to FIG. 4 because the figure did not reference fanout circuitry 30. Applicant has amended FIG. 4 to reference fanout circuitry 30. Applicant respectfully requests withdrawal of the drawing objection.

The Examiner alleges that it not clear how the terms "first programmable current mirror" and "second programmable current mirror" are represented in FIG. 4. In the specification and FIG. 4, "first programmable current mirror" is designated as PCM1 and "second programmable current mirror" is designated as PCM2. The terms "first programmable current mirror stage" and "first fanout current mirror stage" were deleted from the claims. Applicant disagrees with the Examiner's assertion that CM1 is not a fanout current mirror and that PCM2 is not a second programmable current mirror.

Claims 1 to 8 were rejected under 35 U.S.C. 112, second paragraph because the Examiner could not determine which elements were the terms "first programmable current mirror", "second programmable current mirror", "first programmable current mirror stage", and "second programmable current mirror stage". As stated in the foregoing, "first programmable current mirror" is designated as PCM1 and "second programmable current mirror" is designated as

PCM2 and Applicant has removed the terms “first programmable current mirror stage”, and “second programmable current mirror stage” were removed from the claims.

The Examiner also alleges that it is unclear which elements are the current compensation circuit. Applicant has modified the claims to distinctly claim the invention.

The Examiner also rejected the claims because of the use of current path. Applicant has removed “current path” from the claims.

The Examiner has also rejected the claims under §112 for the use of the term “channel length modulation factor”. Applicant has amended the specification to clear-up any ambiguities with the use of “channel length modulation factor” in the claims. Applicant submits that the term “channel length modulation factor” is a term of art used in the design of transistors, for example, in metal-oxide-semiconductor field effect transistors (MOSFETs) and CMOS technology in general. Applicant respectfully requests withdrawal of the §112 rejections.

Turning to the art rejections, claims 1 and 5 to 8 were rejected under 35 U.S.C. § 102 as being anticipated by Kwan (U.S. Patent 4,990,864).

Claim 1 is directed to a circuit. The circuit includes a supply voltage current mirror configured to be coupled to a supply voltage source, and comprising a current output configured to be coupled to a node. The node couples a fanout current mirror and a first programmable current mirror having a first channel length modulation factor λ_1 . The circuit also includes a second programmable current mirror coupled to the supply voltage current mirror and includes a second transistor having a second channel length modulation factor λ_2 . The second channel length modulation factor λ_2 is larger than the first channel length modulation factor λ_1 . The

second programmable current mirror is configured to maintain, with the first programmable current mirror, a bias current through the fanout current mirror substantially independent of voltage changes in the supply voltage source.

The applied art is not understood to disclose or suggest the foregoing features of claim 1. In particular, Kwan does not disclose or suggest a second channel length modulation factor λ_2 being larger than a first channel length modulation factor λ_1 .

Specifically, Kwan discloses bipolar junction transistors. Kwan does not even mention MOSFETs much less a channel length modulation factor. Therefore, Kwan could not disclose or suggest that the second channel length modulation factor λ_2 is larger than the first channel length modulation factor λ_1 .

Claims 1, 2 and 5 to 8 were rejected under 35 U.S.C. § 102 as being anticipated by Klein (U.S. Patent 5,691,658).

The applied art is not understood to disclose or suggest the foregoing features of claim 1. In particular, Kwan does not disclose or suggest a second channel length modulation factor λ_2 being larger than a first channel length modulation factor λ_1 .

Specifically, Klein does not mention channel length modulation factors much less a second channel length modulation factor λ_2 being larger than the first channel length modulation factor λ_1 . Further, the Examiner has suggested that transistors M4 and M7' of Klein form the second programmable current mirror and transistors M5 and M9' of Klein form the first programmable current mirror. Klein recites that "M4 and M5 are made to have the same size" (see column 4, lines 44 to 45) and that M7' and M9' are made to have adjustable effective widths

(see column 5, lines 63 to 65). However, only adjustments to channel widths are mentioned in Klein, and he never describes the relationship between $M7'$ and $M9'$. Klein does not disclose or suggest the second channel length modulation factor λ_2 being larger than the first channel length modulation factor λ_1 .

Claim 5 is a means claim that roughly corresponds to claim 1. Claim 8 is a method claim that roughly corresponds to claim 1. Claim 13 is directed to a circuit that includes the circuit of claim 1. Applicant submits that claims 5, 8 and 13 are allowable for at least the same reasons that claim 1 is allowable.

For at least the foregoing reasons, Applicant requests withdrawal of the art rejections.

Applicants submit that all dependent claims now depend on allowable independent claims.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicant submits that the entire application is now in condition for allowance. Such action is respectfully requested at the Examiner's earliest convenience.

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All correspondence should be directed to the address below. Applicant's attorney can be reached by telephone at (617) 422-3532.


Enclosed is a Petition for a One-Month Extension of Time. No other fee is believed to be due for this Response; however, if any other fees are due, please apply such fees to Deposit

Account No. 20-0515 referencing Attorney Docket 1839-US.

Respectfully submitted,

Date:

May 13, 2005


Anthony T. Moosey
Reg. No. 55,773

Teradyne, Inc.
321 Harrison Avenue, MS-H61
Boston, MA 02118
Telephone: (617) 422-3532
Facsimile: (617) 422-2290